

Claims

- [c1] A retainer for a first carrier board and a second carrier board comprising:
a retainer body having a middle retainer portion having a hole therethrough, a first retainer side extending from the middle portion and a second retainer side extending from the middle portion;
a first snap disposed on said first retainer side engaging said first carrier board;
and
a second snap disposed on said second retainer side engaging said second carrier board.
- [c2] A retainer as recited in claim 1 further comprising a thread insert disposed within said hole.
- [c3] A retainer as recited in claim 1 wherein the first retainer side extends parallel to the second retainer side.
- [c4] A retainer as recited in claim 1 further comprising a first restraint and a second restraint disposed respectively on said first retainer side and said second retainer side, said first restraint and said second restraint sized to receive an alignment slot disposed on said first carrier board and said second carrier board.
- [c5] A retainer as recited in claim 1 wherein said first retainer side and said second retainer side each comprise at least one flex slot.
- [c6] A retainer as recited in claim 1 wherein said middle retainer portion, said first retainer side and said second retainer side substantially forms a U-shape.
- [c7] A connector assembly for a circuit board comprising:
a first carrier board fixedly coupled to the circuit board;
a second carrier board fixedly coupled to the circuit board; and
a retainer body positioned adjacent to the first carrier board and said second carrier board, said retainer including a first snap engaging said first substrate and a second snap engaging said second carrier board, said first snap and said second snap retaining said retainer body between said first carrier board and said second carrier board.

[c8] A connector assembly as recited in claim 7 wherein said retainer body comprises a middle retainer portion having a hole therethrough, a first retainer side extending from the middle portion, a second retainer side extending from the middle portion;
said first snap disposed on said first retainer side; and
said second snap disposed on said second retainer side.

[c9] A connector assembly as recited in claim 8 further comprising a thread insert disposed within said hole.

[c10] A connector assembly as recited in claim 8 wherein the first retainer side extends parallel to the second retainer side.

[c11] A connector assembly as recited in claim 8 further comprising a first restraint and a second restraint disposed respectively on said first retainer side and said second retainer side, said first restraint and said second restraint sized to receive an alignment slot disposed on said first carrier board and said second carrier board.

[c12] A connector assembly as recited in claim 8 wherein said first retainer side and said second retainer side each comprise at least one flex slot.

[c13] A connector assembly as recited in claim 8 wherein said middle retainer portion, said first retainer side and said second retainer side substantially forms a U-shape.

[c14] A connector assembly as recited in claim 8 wherein the first carrier board comprises an electrical connection.

[c15] A connector assembly as recited in claim 15 wherein said electrical connection comprises a plurality of sockets.

[c16] A connector assembly as recited in claim 15 wherein said plurality of sockets comprise a plurality of ball grid arrays.

[c17] An imaging system comprising:
a detector module having a back shell coupled thereto; and

a data acquisition system comprising:
a circuit board,
a connector housing sized to receive said back shell,
a first carrier board fixedly coupled to the circuit board,
a second carrier board fixedly coupled to the circuit board; and
a retainer body positioned adjacent to the first carrier board and said second carrier board, said retainer including a first snap engaging said first substrate and a second snap feature engaging said second substrate to retain said retainer body between said first carrier board and said second carrier board.

[c18] An imaging system as recited in claim 17 wherein said retainer body comprises a middle retainer portion having a hole therethrough, a first retainer side extending from the middle portion, a second retainer side extending from the middle portion;
said first snap disposed on said first retainer side; and
said second snap disposed on said second retainer side.

[c19] An imaging system as recited in claim 18 further comprising a thread insert disposed within said hole.

[c20] An imaging system as recited in claim 18 further comprising a first restraint and a second restraint disposed respectively on said first retainer side and said second retainer side, said first restraint and said second restraint sized to receive an alignment slot disposed on said first carrier board and said second carrier board.